Protection for Threatened and Impaired Watersheds, 2000

Proposed Rule Language
[from January 11, 2000]

Amend § 895 Abbreviations Applicable Throughout Chapter.

Note: The following five abbreviations may be added to this section in alphabetic order.

CDF	California Department of Forestry and Fire Protection
DFG	California Department of Fish and Game
HCP	Habitat Conservation Plan
NMFS	National Marine Fisheries Service
RWQCB	Regional Water Quality Control Board

Note: Authority cited: Sections 4551, 4551.5 and 21082, Public Resources Code. Reference: Sections 4511, 4512, 4513, 4521.3, 4522, 4522.5, 4523-4525, 4525.3, 4525.5, 4525.7, 4526, 4526.5, 4527, 4527.5, 4528, 4551, 4551.5, 4552, 4582 and 21080.5, Public Resources Code.

Amend § 895.1. Definitions.

Note: The following nine definitions may be added to this section in alphabetic order.

"Bankfull stage" means the stage that occurs when discharge fills the entire channel cross section without significant inundation of the adjacent floodplain, and has a recurrence interval of 1.5 to 2.0 years.

“Beneficial Functions of Riparian Zone” means the specific role of the riparian zone to provide protection for water temperature control, streambed and flow modification by large woody debris, filtration of organic and inorganic material, upslope stability, bank and channel stabilization and vegetative structure diversity for fish and wildlife habitat.

"Channel zone" means that area that includes a watercourse's channel at bankfull stage and a watercourse's floodplain, encompassing the area between the watercourse transition lines.

"Natural Recovery" means the change in watershed conditions that primarily limit the values set forth in 14 CCR § 916.2 [936.2, 956.2] that could reasonably be predicted to occur over the anticipated effective period of the plan if the plan were not approved.

"Inner Gorge" means a geomorphic feature formed by coalescing scars originating from landsliding and erosional processes caused by active stream erosion. The feature is identified as that area situated immediately adjacent to the stream channel below the first break in slope.

“Saturated soil conditions” means ~~1) the wetness of the soil within a yarding area such that soil strength is exceeded and displacement from timber operations will occur. It is evidenced by soil moisture conditions that result in: a) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance, or b) inadequate traction without blading wet soil or, c) soil displacement in~~

~~amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I or II watercourse or lake. Soils frozen to a depth sufficient to support equipment weight are excluded. 2) soil moisture conditions on roads and landings, in excess of that which occurs from normal road watering or light rainfall that will result in the significant loss of surface material from the road and landings in amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I or II watercourse or lake~~ that site conditions are sufficiently wet that timber operations displace soils in yarding or mechanical site preparation areas or displace road and landing surface materials in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, or in downstream Class I, II, III, or IV waters that is visible or would violate applicable water quality requirements.

In yarding and site preparation areas, this condition may be evidenced by: a) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance, b) inadequate traction without blading wet soil, c) soil displacement in amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I, II, III, or IV waters, or d) creation of ruts greater than would be normal following a light rainfall.

On logging roads and landing surfaces, this condition may be evidenced by a) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance, b) inadequate traction without blading wet soil, c) soil displacement in amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I, II, III, or IV waters, d) pumping of road surface materials by traffic, or e)

creation of ruts greater than would be created by traffic following normal road watering, which transports surface material to a drainage facility that discharges directly into a watercourse.

Soils or road and landing surfaces that are hard frozen are excluded from this definition.

"Stable operating surface" means that throughout the period of use, the operating surface of a logging road or landing does not either (1) generate waterborne sediment in amounts sufficient to cause a turbidity increase in downstream Class I, II, III, or IV waters that is visible or would violate applicable water quality requirements; or (2) channel water for more than 50 feet that is discharged into Class I, II, III, or IV waters.

"Watercourse or Lake Transition Line"

(a) for a watercourse with an unconfined channel (a channel with a valley to width ratio at bankfull stage of 4 or greater) means that line defined by the landward margin of the most active portion of the channel zone area readily identified in the field by:

(1) no soil development, and

(2) riparian vegetation dominated by riverine hardwoods and occasional conifers.

If field identification is ambiguous, identification of the 20-year flood stage would be delimit this portion of the channel zone.

(b) for a watercourse with a confined channel means that line ~~closest to the watercourse or lake where riparian vegetation is permanently established~~ that is the outer boundary of a watercourse's 20-year return

interval flood event floodplain. This outer boundary corresponds to an elevation equivalent to twice the maximum depth of the adjacent riffle at bankfull stage. The bankfull stage elevation shall be determined by field indicators and may be verified by drainage area/bankfull discharge relationships.

(c) for a lake, it is that line closest to the lake where riparian vegetation is permanently established.

"Watersheds with threatened or impaired values" means any planning watershed where populations of anadromous salmonids that are listed as threatened, endangered, or candidate under the State or Federal Endangered Species Acts with their implementing regulations, are currently present or can be restored.

Note: Authority cited: Sections 4551, 4551.5, 4553, 4561, 4561.5, 4561.6, 4562, 4562.5, 4562.7 and 4591.1, Public Resources Code. Reference: Sections 4512, 4513, 4526, 4551, 4551.5, 4561, 4561.6, 4562, 4562.5, 4562.7, 4583.2, 4591.1, 21001(f), 21080.5, 21083.2 and 21084.1, Public Resources Code; CEQA Guidelines Appendix K (printed following Section 15387 of Title 14 Cal.Code of Regulations), and ***Laupheimer v. State*** (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

Amend § 898 Feasibility Alternatives

After considering the rules of the Board and any mitigation measures proposed in the plan, the RPF shall indicate whether the operation would have any significant adverse impact on the environment. On TPZ lands, the harvesting per se of trees shall not be presumed to have a significant adverse impact on the environment. If the RPF indicates that significant adverse impacts will occur, the RPF shall explain in the plan why any alternatives or additional mitigation measures that would significantly reduce the impact are not feasible.

Cumulative impacts shall be assessed based upon the methodology described in Board Technical Rule Addendum Number 2, Forest Practice Cumulative Impacts Assessment Process and shall be guided by standards of practicality and reasonableness. The RPF's and plan submitter's duties under

this section shall be limited to closely related past, present and reasonably foreseeable probable future projects within the same ownership and to matters of public record. The Director shall supplement the information provided by the RPF and the plan submitter when necessary to insure that all relevant information is considered.

Alternative 1

When assessing cumulative impacts of a proposed project on any portion of a waterbody that is located within or downstream of the proposed timber operation and that is listed as water quality limited under Section 303(d) of the Federal Clean Water Act, the RPF shall assess the degree to which the proposed operations would result in impacts that may combine with existing listed stressors to impair a waterbody's beneficial uses, thereby causing a significant adverse effect on the environment. The plan preparer shall provide feasible mitigation measures to reduce any such impacts from the plan to a level of insignificance, and may provide measures, insofar as feasible, to help attain water quality standards in the listed portion of the waterbody.

Alternative 2

When assessing cumulative impacts of a proposed project on any portion of a waterbody that is located within or downstream of the proposed timber operation and that is listed as water quality limited under Section 303(d) of the Federal Clean Water Act, the RPF shall assess the degree to which the proposed operations would result in impacts that may combine with existing listed stressors to impair a waterbody's beneficial uses, thereby causing a significant adverse effect on the environment. The plan preparer shall provide feasible mitigation measures to reduce any such impacts from the plan

to a level of insignificance, and should provide measures, insofar as feasible, to help attain water quality standards in the listed portion of the waterbody.

The Director's evaluation of such impacts and mitigation measures will be done in consultation with the appropriate RWQCB.

Note: Authority cited: Sections 4551 and 4553, Public Resources Code. Reference: Sections 4512, 4513, 4551.5, and 4582.75, Public Resources Code; and *Laupheimer v. State* (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

Amend § 898.2 Special Conditions Requiring Disapproval of Plans

The Director shall disapprove a plan as not conforming to the rules of the Board if any one of the following conditions exist:

(a) Boundaries of the area to be harvested are not clearly delineated in the plan.

(b) Public acquisition of the parcel for purposes which would be impaired by timber harvesting, is legislatively authorized, funded and imminent.

(c) There is evidence that the information contained in the plan is incorrect, incomplete or misleading in a material way, or is insufficient to evaluate significant environmental effects. The sufficiency of the information provided in a THP to evaluate significant environmental effects shall be judged in light of what is reasonable and necessary.

(d) Implementation of the plan as proposed would result in either a "taking" or finding of jeopardy of wildlife species listed as rare, threatened or endangered by the Fish and Game Commission, the National Marine Fisheries Service, or Fish and Wildlife Service, or would cause significant, long-term damage to listed species. The Director is not required to disapprove a plan which would result in a "taking" if the "taking" is incidental and is authorized by a wildlife agency acting within its authority under state or federal endangered species acts.

(e) Implementation of the plan would irreparably damage plant species listed as rare or endangered by the Department of Fish and Game and when the timber owner fails to comply with F&GC 1913.

(f) Implementation of the plan as proposed would result in the taking of an individual Northern Spotted Owl prohibited by the Federal Endangered Species Act.

(g) Implementation of the plan as proposed would not achieve maximum sustained production of high quality timber products as provided for by the rules of the Board, and by the intent of the Act.

(h) Implementation of the plan as proposed would cause a violation of any requirement of an applicable water quality control plan adopted or approved by the State Water Resources Control Board.

Note: Authority cited: Sections 4551, 4555 and 4582, Public Resources Code. Reference: Sections 2053, 2080.1, 2090-2097, 2830 and 2835, Fish and Game Code; Sections 4555, 4582.7 and 4582.75, Public Resources Code; Section 51115.1, Government Code; the federal Endangered Species Act of 1973, 16 U.S.C. et seq.; and *Laupheimer v. State* (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

Amend §§ 914.8, 934.8, and 954.8 Tractor Road Watercourse Crossing

Watercourse crossing facilities on tractor roads shall be planned, constructed, maintained, and removed according to the following standards:

(a) The number of crossings shall be kept to a minimum. Existing crossings~~s~~ locations shall be used wherever feasible.

(b) A prepared watercourse crossing using a structure such as a bridge, culvert, or temporary log culvert shall be used to protect the watercourse from siltation where tractor roads cross a watercourse in which water may be present during the life of the crossing.

(c) Crossing facilities on watercourses that support fish shall allow for unrestricted passage of all life stages of fish that may be present, and for unrestricted passage of water. Such crossing facilities shall be fully described in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.

(d) Watercourse crossing facilities not constructed to permanent crossing standards on tractor roads shall be removed before the beginning of the winter period. If a watercourse crossing is to be removed, it shall be removed in accordance with 14 CCR 923.3(d) [943.3(d), 963.3(d)].

(e) If the watercourse crossing involves a culvert, the minimum diameter shall be stated in the THP and the culvert shall be of a sufficient length to extend beyond the fill material.

(f) Consistent with the protection of water quality, exceptions may be provided through the Fish and Game Code and shall be indicated in the plan.

Note: Authority cited: Sections 4551, 4551.5, and 4553, Public Resources Code. Reference: Sections 4512, 4513, 4527, 4562.5, 4562.7, and 4582, Public Resources Code.

Amend §§ 916, 936, and 956 Intent of Watercourse and Lake Protection.

The purpose of this article is to ~~insure the protection of~~ ensure that the beneficial uses ~~that are derived from the physical form, water quality, and biological characteristics~~ of water~~course~~s ~~and lakes~~, native aquatic and riparian species, and the beneficial functions of riparian zones are protected from potentially significant adverse site-specific and cumulative impacts associated with timber operations.

It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing equal consideration for the beneficial uses of water. Further, it is the intent of the Board to clarify and assign responsibility~~, to recognize~~ for recognition of potential and existing impacts of timber operations on~~ the beneficial uses of water,~~ watercourses and lakes, native aquatic and riparian-associated species, and the beneficial functions of riparian zones and to ensure adoption of feasible measures to ~~prevent water pollution related to timber harvesting~~ effectively achieve compliance with this article. Further, it is the intent of the Board that the evaluations that are made, and the measures that are taken or

prescribed, be documented in a manner that clearly and accurately represents those existing conditions and those measures. "Evaluations made" pertain to the assessment of the conditions of the physical form, water quality, and biological characteristics of watercourses and lakes, including cumulative impacts affecting the beneficial uses of water on both the area of planned logging operations and in the Watershed Assessment Area (WAA). "Measures taken" pertain to the procedures used or prescribed for the restoration, enhancement, and maintenance of the beneficial uses of water.

All provisions of this article shall be applied in a manner, which complies with the following:

(a) During and following timber operations, the beneficial uses of water, native aquatic and riparian-associated species, and the beneficial functions of riparian zones shall be maintained where they are in good condition, protected where they are threatened, and insofar as feasible, restored where they are impaired.

(b) Protection of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not do either of the following during timber operations:

(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;

(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.

Alternative 1

(c) Protecting and restoring native aquatic and riparian-associated species, the beneficial functions of riparian zones and the quality and beneficial uses of water shall be the primary management objective within any prescribed WLPZ and within any ELZ or EEZ designated for watercourse or lake protection, or within any planning watershed with threatened or impaired values.

Alternative 2

(c) Protecting and restoring native aquatic and riparian-associated species, the beneficial functions of riparian zones and the quality and beneficial uses of water shall be given equal consideration as a management objective within any prescribed WLPZ and within any ELZ or EEZ designated for watercourse or lake protection.

(d) The measures set forth in this Section are meant to enforce the publics historical and legal interest in protection for wildlife, fish, and water quality and are to be used to guide timberland owners in meeting their legal responsibilities to protect public trust resources.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 4512, 4513, 4551.5, 4552, 4562.5, 4562.7, 21001(b), (f), 21002 and 21002.1, Public Resources Code; Sections 100, 1243, 1243.5, 13001, 13001(f), 13146 and 13147, Water Code; and 33 USC Section 1288(b)(2)(F).

Amend §§ 916.2, 936.2, and 956.2 Protection of the Beneficial Uses of Water and Riparian Functions.

(a) The measures used to protect ~~the beneficial uses of water for~~ each watercourse and lake in a logging area shall be determined by the presence and condition of the following values:

(1) The existing and restorable quality and beneficial uses of water as specified by the applicable water quality control plan and as further identified and refined during preparation and review of the plan.

(2) The restorable uses of water for fisheries as identified by the ~~Department of Fish and Game~~ DFG or as further identified and refined during preparation and review of the plan.

(3) Riparian habitat that provides for t~~T~~he biological needs of ~~the fish and wildlife~~ native aquatic and riparian-associated species ~~provided by the riparian habitat~~ as specified in 14 CCR 916.4(b) [936.4(b), 956.4(b)].

(4) Sensitive ~~near stream~~ conditions near watercourses and lakes as specified in 14 CCR 916.4(a) [936.4(a), 956.4(a)].

These values shall be protected from potentially significant adverse impacts from timber operations and restored to good condition, where needed, through a combination of the rules and plan-specific mitigation.

(b) The State's waters are grouped into four classes based on key beneficial uses. These classifications shall be used to determine the appropriate minimum protection measures to be applied ~~to the State's waters~~

during the conduct of timber operations. The basis for classification (characteristics and key beneficial uses) are set forth in 14 CCR 916.5 [936.5, 956.5], Table 1 and the range of minimum protective measures applicable to each class are contained in ~~Sections~~ 14 CCR 916.3 [936.3, 956.3], 916.4~~(c)~~ [936.4, 956.4], and 916.5 [936.5, 956.5]

(c) When the protective measures contained in 14 CCR 916.5 [936.5, 956.5] are not adequate to provide protection to beneficial uses, feasible protective measures shall be developed by the RPF or proposed by the Director under the provisions of 14 CCR 916.6 [936.6, 956.6], Alternative Watercourse and Lake Protection, and incorporated in the ~~THP~~ plan when approved by the Director.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b)(2)(F).

Amend §§ 916.6, 936.6, and 956.6 Alternative Watercourse and Lake Protection

(a) Alternative prescriptions for the protection of watercourses and lakes may be developed by the RPF or proposed by the Director on a site-specific basis provided the following conditions are complied with and the alternative prescriptions will achieve compliance with the standards set forth in 14 CCR 916.3 [936.3, 956.3] and 916.4(b) [936.4(b), 956.4(b)].

(1) The following information regarding an alternative prescription shall be included in the THP:

(A) An identification of each standard prescription which would be replaced by the alternative prescription.

(B) An identification of any beneficial uses of water or other features listed in 14 CCR 916.4(b) [936.4(b), 956.4(b)] which may be adversely affected by the replaced standard prescription and the alternative practice.

(C) An evaluation of any significant effects on such beneficial uses or features due to implementation of the alternative prescription.

(D) A clear and complete explanation and justification as to the reasons why, given site-specific technical, environmental, economic, or institutional considerations, an alternative prescription is needed. The reasons given must include at least one of the following:

(aa) Implementation of the specified standard prescriptions would not be feasible.

(bb) Implementation of the specified standard prescription(s) would not adequately prevent or reduce damage to the quality and beneficial uses of water.

(cc) Implementation of the proposed alternative prescription would provide equal or greater protection, including all proposed mitigations for the quality and beneficial uses of water and those features listed in 916.4(b) [936.4(b), 956.4(b)] than would implementation of the specified standard prescriptions.

(E) A plan for evaluating the results of the proposed alternative practice by either the plan submitter or the Director. The plan must include the criteria and procedures for evaluating and inspecting each approved alternative practice.

(2) The alternative measures stated in the plan shall be written so that they provide clear, enforceable standards for the guidance of the timber operator.

(3) Prior to beginning or continuing an operation in which alternative measures have been added to an approved THP in regard to watercourse and lake protection measures, the timber operator shall acknowledge the new specifications by signing and filing with the director, a copy of the amended plan.

(b) The director shall not accept for inclusion in a THP alternative watercourse and lake protection measures which do not meet the standard of subsection (a) of this section. In the event that written comments received from <u>one</u> ~~two~~ or more agencies listed in 4582.6 PRC and 14 CCR 1037.3 and which participated in review of the plan~~, including on-the-ground inspection,~~ lead to the conclusion that the proposed alternative does not meet the criteria of 14 CCR 916.5 [936.5, 956.5], and is therefore not consistent with rules of the Board, the director shall reject the proposed alternative.

(c) Alternative practices stated in an approved THP shall have the same force and authority as those practices required by the standard rule.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 4512, 4513, and 4551.5, Public Resources Code; and USC Section 1288(b)(2)(F).

~~**§§ 916.9 [936.9, 956.9] Exclusion of Material from Streams and Lakes.**~~

Adopt §§ 916.9, 936.9, and 956.9 Protection and Restoration in Watersheds with Threatened or Impaired Values.

In addition to all other district Forest Practice Rules, the following requirements shall apply in any planning watershed with threatened or impaired values:

(a) Every timber operation shall be planned and conducted to prevent any deleterious interference with the natural recovery of the watershed conditions that primarily limit the values set forth in 14 CCR 916.2 [936.2, 956.2](a) (e.g., no net sediment load increase where sediment is a primary limiting factor; no net thermal load increase where water temperature is a primary limiting factor; no net loss of instream large woody debris or recruitment potential where lack of this value is a primary limiting factor; no substantial increase in peak flows or large flood frequency where peak flows or large flood frequency are primary limiting factors). To achieve this goal, every timber operation shall be planned and conducted to meet the following objectives where they affect a primary limiting factor:

(1) Comply with the terms of a Total Maximum Daily Load (TMDL) that has been adopted to address factors that may be affected by timber operations if a TMDL has been adopted, or result in no net sediment load increase to a watercourse system or lake.

(2) Result in no decrease in the stability of a watercourse channel or of a watercourse or lake bank.

(3) Result in no blockage of any aquatic migratory routes for anadromous salmonids or listed species.

(4) Result in no stream flow reductions during critical low water periods except as part of an approved water drafting plan pursuant to 14 CCR 916.9(u) [936.9(u), 956.9(u)].

(5) Protect, maintain, and restore trees (especially conifers), snags, or downed large woody debris that currently, or may in the foreseeable future, provide large woody debris recruitment needed for instream habitat structure and fluvial geomorphic functions.

(6) Protect, maintain, and restore the quality and quantity of vegetative canopy needed to: (i) provide shade to the watercourse or lake, (ii) minimize daily and seasonal temperature fluctuations, (iii) maintain daily and seasonal water temperatures within the preferred range for anadromous salmonids or listed species where they are present or could be restored, and (iv) provide hiding cover and a food base where needed.

(7) Result in no substantial increases in peak flows or large flood frequency.

(b) Pre-plan adverse cumulative watershed effects on the populations and habitat of anadromous salmonids shall be considered likely to exist. The plan shall specifically acknowledge or refute that such effects exist. Where appropriate, the plan shall set forth measures to effectively reduce such effects.

(c) Any timber operation or silvicultural prescription within 150 feet of any Class I watercourse or lake transition line or 100 feet of any Class II watercourse or lake transition line shall have protection, maintenance, or restoration of the beneficial uses of water or the populations and habitat of anadromous salmonids or listed aquatic or riparian-associated species as its

primary objectives; harvesting of wood products shall be secondary to those objectives.

Additionally, for evenaged regeneration methods and rehabilitation with the same effects as a clearcut that are adjacent to a WLPZ, a special operating zone shall retain understory and mid-canopy conifers and hardwoods. These trees shall be protected during falling, yarding and site preparation to the extent feasible. If trees that are retained within this zone are knocked down during operations, that portion of the trees that is greater than 6" in diameter shall remain within the zone as LWD. The zone shall be 25 feet above Class I WLPZs with slopes 0-30% and above Class II WLPZs and 50 feet above Class I WLPZs with slopes > 30%.

(d) The plan shall fully describe: (i) the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed timber operations, and (ii) the person(s) responsible for the implementation of each measure, if other than the timber operator.

In proposing, reviewing, and approving such measures, preference shall be given to the following: (i) measures that are both onsite (i.e., on or near the plan area) and in-kind (i.e., erosion control measures where sediment is the problem), and (ii) sites that are located to maximize the benefits to the impacted portion of a watercourse or lake. Out-of-kind measures (i.e., improving shade where sediment is the problem) shall not be approved as meeting the requirements of this subsection.

(e) There shall be no timber operations within the channel zone with the following exceptions:

(1) timber harvesting that is directed to improve salmonid habitat through the limited use of the selection or commercial thinning silvicultural methods with review and comment by DFG.

(2) timber harvesting necessary for the construction or reconstruction of approved watercourse crossings.

(3) timber harvesting necessary for the protection of public health and safety.

(4) to allow for full suspension cable yarding when necessary to transport logs through the channel zone.

In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan prior to the preharvest inspection.

(f) The minimum WLPZ width for Class I waters shall be 150 feet from the watercourse or lake transition line.

(g) Within a WLPZ for Class I waters, at least 85 percent overstory canopy shall be retained within 75 feet of the watercourse or lake transition line, and at least 65 percent overstory canopy within the remainder of the WLPZ. The overstory canopy must be composed of at least 25% overstory conifer canopy post-harvest. Where these minimum percentages do not currently exist within the Class I WLPZ, no harvesting of conifers shall occur within the Class I WLPZ except under those condition specified in 14 CCR § 916.9(e) [936.9(e), 956.9(e)], and harvesting of hardwoods shall only occur for the purpose of enabling conifer regeneration. Such harvesting shall only be allowed following consultation with a state employed biologist

who is accepted by the Department of Fish and Game as having sufficient knowledge and education to evaluate the proposed practices.

(h) For Class I waters, any plan involving timber operations within the WLPZ shall contain the following information:

(1) A clear and enforceable specification of how any disturbance or log or tree cutting and removal within the Class I WLPZ shall be carried out to conform with 14 CCR 916.2 [936.2, 956.2](a) and 916.9 [936.9, 956.9](a).

(2) A description of all existing permanent crossings of Class I waters by logging roads and clear specification regarding how these crossings are to be modified, used, and treated to minimize risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages.

(3) Clear and enforceable specifications for construction and operation of any new crossing of Class I waters to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage, or other potential impairment of beneficial uses of water.

(i) Recruitment of large woody debris for aquatic habitat in Class I anadromous fish-bearing or restorable waters shall be ensured by retaining the ten largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones. The retained conifers shall be selected from within the plan area that lies within 50 feet of the watercourse transition line.

The RPF may propose alternatives to substitute smaller diameter trees, trees that are more than 50 feet from the watercourse transition line, or other alternatives on a site specific basis. The RPF must explain and justify in the THP why the proposed alternative is more conducive to current

and long-term LWD recruitment, shading, bank stability, and the beneficial functions of riparian zones.

The Director may approve such alternatives provided the alternative practice will achieve the goals of this section. The Director shall not accept for inclusion in a THP any alternative practice as described in this section where one or more agencies listed in 4582.6 of the PRC and 14 CCR 1037.3 have submitted written comments which lead to the Director's conclusion that the proposed alternative will not meet the goals of this section and the agency(ies) participated in the review of the plan, including an on-the-ground inspection.

(j) The minimum WLPZ width for Class II waters shall be 100 feet from the watercourse or lake transition line and shall not extend beyond the hydrographic boundary of the watercourse, whichever is closest to the channel.

(k) Within a WLPZ for Class II waters, at least 85 percent overstory canopy shall be retained within 30 feet of the watercourse or lake transition line, and at least 65 percent overstory canopy within the remainder of the WLPZ. The overstory canopy must be composed of at least 25% overstory conifer canopy post-harvest. Where these minimum percentages do not currently exist within the Class II WLPZ, no harvesting of conifers shall occur within the Class II WLPZ except under those condition specified in 14 CCR § 916.9(e) [936.9(e), 956.9(e)], and harvesting of hardwoods shall only occur for the purpose of enabling conifer regeneration. Such harvesting shall only be allowed following consultation with a state employed biologist who is accepted by the Department of Fish and Game as having sufficient knowledge and education to evaluate the proposed practices.

Alternative 1

(l) Where an inner gorge extends beyond a Class I or Class II WLPZ and slopes are greater than 55%, a special management zone shall be established where the use of evenaged regeneration methods is prohibited. This zone shall extend upslope to the first major break-in-slope to less than 55% for a distance of 100 feet or more, or 300 feet as measured from the watercourse or lake transition line, which ever is less. All operations on slopes exceeding 65% within an inner gorge shall be reviewed by a CEG prior to plan approval, regardless of whether they are proposed within a WLPZ or outside of a WLPZ.

Alternative 2

(l) Where an inner gorge extends beyond a Class I WLPZ and slopes are greater than 55%, a special management zone shall be established where the use of evenaged regeneration methods is prohibited. This zone shall extend upslope to the first major break-in-slope to less than 55% for a distance of 100 feet or more, or 300 feet as measured from the watercourse or lake transition line, which ever is less. All operations on slopes exceeding 65% within an inner gorge shall be reviewed by a CEG prior to plan approval, regardless of whether they are proposed within a WLPZ or outside of a WLPZ.

Alternative 1

(m) The following shall apply to Class III waters:

(1) A 50 foot wide ELZ or EEZ is required.

(2) Sufficient hardwoods shall be retained within the ELZ or EEZ for bank stability.

(3) No ignition of fuels shall occur within the ELZ or EEZ.

(4) Burning within an EEZ and ELZ shall not consume the majority of large Woody debris within the zone.

Alternative 2

(m) The following shall apply to Class III waters:

(1) A ~~30 to~~ 50 foot wide ~~ELZ or EEZ~~ WLPZ is required for Class III waters on slopes less than 30%. Except for truck crossings identified in the plan, the WLPZ shall be an EEZ. All hardwoods shall be retained within the ~~ELZ or EEZ~~ WLPZ. Burning through the WLPZ shall not fully consume large organic debris within the WLPZ.

(2) A 100 foot wide WLPZ is required for Class III waters on slopes greater than or equal to 30%. Except for truck crossings identified in the plan, the WLPZ shall be an EEZ. At least 65% overstory canopy within the first 30 feet shall be retained. The overstory canopy must be composed of at least 25% overstory conifer post-harvest. Where these minimum percentages do not currently exist within the Class III WLPZ, no timber harvesting shall occur within the Class III WLPZ. All hardwoods shall be retained in the remainder of the WLPZ. No burning shall occur within the WLPZ.

(3) For all Class III waters, no ignition of fuels shall occur within the WLPZ or EEZ.

(n) From October 15 to May 1, the following shall apply: (i) no timber operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR 914.7(a) [934.7(a), 965.7(a)], (ii) unless the winter period operating plan proposes operations during an extended period with low antecedent soil wetness, no tractor roads

shall be constructed, reconstructed, or used on slopes that are over 40 percent and within 200 feet of a Class I, II, or III watercourse, as measured from the watercourse or lake transition line, and (iii) operation of trucks and heavy equipment on roads and landings shall be limited to those with a stable operating surface.

(o) Construction or reconstruction of logging roads, tractor roads, or landings shall not take place during the winter period unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR 914.7(a) [934.7(a), 965.7(a)] that specifically address such road construction. Use of logging roads, tractor roads, or landings shall not take place at any location where saturated soil conditions exist, where a stable logging road or landing operating surface does not exist, or when visibly turbid water from the road, landing, or skid trail surface or inside ditch may reach a watercourse or lake. Grading to obtain a dryer running surface more than one time before reincorporation of any resulting berms back into the road surface is prohibited.

(p) All tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either i) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection, or ii) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood watch.

(q) Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent the discharge of sediment into waters in amounts

deleterious to aquatic species or the quality and beneficial uses of water, or that threaten to violate applicable water quality requirements, shall be applied in accordance with the following standards:

(1) The following requirements shall apply to all such treatments.

i. They shall be described in the plan.

ii. For areas disturbed from May 1 through October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface.

iii. For areas disturbed from October 16 through April 30, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.

(2) The traveled surface of logging roads shall be treated to prevent waterborne transport of sediment and concentration of runoff that results from timber operations.

(3) The treatment for other disturbed areas, including: (i) areas exceeding 100 contiguous square feet where timber operations have exposed bare soil, (ii) approaches to tractor road watercourse crossings between the drainage facilities closest to the crossing, (iii) road cut banks and fills, and (iv) any other area of disturbed soil that threatens to discharge sediment into waters in amounts deleterious to the quality and beneficial uses of water, may include, but need not be limited to, mulching, rip-rapping, grass seeding, or chemical soil stabilizers. Where straw, mulch, or slash is used, the minimum coverage shall be 90%, and any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of timber operations. The RPF may propose alternative

treatments that will achieve the same level of erosion control and sediment discharge prevention.

(4) Where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from timber operations, the ground shall be treated by measures including, but not limited to, seeding, mulching, or replanting, in order to retain and improve its natural ability to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes.

(r) As part of the plan, the RPF shall identify active erosion sites in the logging area, assess them to determine which sites pose significant risks to the beneficial uses of water, assess them to determine whether feasible remedies exist, and address in the plan feasible remediation for all sites that pose significant risk to the beneficial uses of water.

(s) The erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned in accordance with 14 CCR 923.8 shall be three years.

(t) Site preparation activities shall be designed to prevent soil disturbance within, and minimize soil movement into, the channel of watercourses. Prior to any broadcast burning, burning prescriptions shall be designed to prevent loss of large woody debris in watercourses, and vegetation and duff within a WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection. No ignition is to occur within any WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection. When burning prescriptions are proposed, the measures or burning restrictions which are intended to accomplish this goal shall be stated in the plan and

included in any required burning permit. This information shall be provided in addition to the information required under 14 CCR 915.4 [935.4, 954.4].

(u) Water drafting for timber operations from within a channel zone of a natural watercourse or from a lake shall conform with the following standards:

(1) The RPF shall incorporate into the THP:

(A) a description and map of proposed water drafting locations,

(B) the watercourse or lake classification, and

(C) the general drafting location use parameters (i.e., yearly timing, estimated total volume needed, estimated total uptake rate and filling time, and associated water drafting activities from other THPs).

(2) On Class I and Class II streams where the RPF has estimated that:

(A) bypass flows are less than 2 cubic feet per second, or

(B) pool volume at the water drafting site would be reduced by 10%, or

(C) diversion rate exceeds 350 gallons per minutes, or

(D) diversion rate exceeds 10% of the above surface flow;

no water drafting shall occur unless the RPF prepares a water drafting plan to be reviewed by DFG and approved by the Director.

The water drafting plan shall include, but not be limited to:

(i) disclosure of estimated percent streamflow reduction and duration of reduction,

(ii) discussion of the effects of single pumping operations, or multiple pumping operations at the same location,

(iii) proposed alternatives and discussion to prevent adverse effects (e.g. reduction in hose diameter, reduction in total intake at one location, described allowances for recharge time, and alternative water drafting

locations),

(iv) conditions for operators to include an operations log kept on the water truck containing the following information: Date, Time, Pump Rate, Filling Time, Screen Cleaned, Screen Conditions, and Bypass flow observations,

(v) a statement by the RPF for a pre-operations field review with the operator to discuss the conditions in the water drafting plan.

(3) Intakes shall be screened in Class I and Class II waters. Screens shall be designed to prevent the entrainment or impingement of all life stages of fish or amphibians. Screen specifications shall be included in the plan.

(4) Approaches to drafting locations within a WLPZ shall be surfaced with rock or other suitable material to avoid generation of sediment.

(v) No timber operations are allowed in a WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection, under emergency notices or exemption notices except for hauling on existing roads, road maintenance, and operations conducted for public safety.

(w) No salvage logging is allowed in a WLPZ without an approved HCP, an SYP, or an approved plan that contains a section that sets forth objectives, goals, and measurable results for streamside salvage operations.

(x) Nonstandard practices (i.e., waivers, exceptions, in-lieu practices, and alternative practices) shall comply with the goals set forth in subsection (a) above as well as with the other requirements set forth in the rules.

(y) Other measures that would effectively achieve the goals set forth in 14 CCR 916.9(a) [936.9(a), 956.9(a)] may be approved in accordance with 14 CCR 916.6 [936.6, 956.6].

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b)(2)(F).

Adopt §§ 916.11, 936.11, and 956.11 Effectiveness and Implementation Monitoring

Where timber operations will be conducted within a WLPZ, the Director may require a post-harvest evaluation of the effectiveness of the mitigations and practices designed to protect the watercourse(s) or lake(s) as a condition of plan approval. The Director shall also require such an evaluation at the request of a RWQCB or DFG if the necessity for the evaluation is supported by substantial evidence in the record. This evidence may include, but is not limited to, potential land failures, accelerated rate of road construction or harvesting within a watershed, concentration or intensity of harvesting activity near watercourses, and potential for accelerated windthrow. The design and implementation of the evaluation shall be done in consultation with the Director, the RWQCB or DFG, and THP submitter, and the sufficiency of the information requested by the Director shall be judged in light of reasonableness and practicality. The evaluation may comprise procedures including, but not limited, to:

(1) Procedures for effectiveness and implementation monitoring,

(2) Existing landowner monitoring programs, or

(3) Photographic monitoring

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b)(2)(F).

Adopt §§ 916.12, 936.12, and 956.12 Section 303(d) Listed Watersheds

For any planning watershed in which timber operations could contribute to the pollutants or stressors which have been identified as limiting water quality in a water body listed pursuant to 303(d) Federal Clean Water Act, the following shall apply:

(a) The Department shall, in collaboration with the appropriate RWQCB and SWRCB, prioritize watersheds in which the following will be done: 1) conduct or participate in any further assessment or analysis of the watershed that may be needed, 2) participate in the development of Total Maximum Daily Load (TMDL) problem assessment, source assessment, or load allocations related to timber operations, and 3) if existing rules are deemed not to be sufficient, develop recommendations for watershed-specific silvicultural implementation, enforcement and monitoring practices to be applied by the Department.

(b) The Department shall prepare a report setting forth the Department's findings and recommendations from the activities identified

pursuant to (a) above. The report shall be submitted to the Board and the appropriate RWQCB. The report shall be made available to the public upon request and placed on the Boards' website for a 90-day period.

(c) Where the Department has recommended the adoption of watershed specific rules are needed, the Board shall consider that recommendation as a proposal for rulemaking under the Administrative Procedures Act (Section 11340 et. seq. Gov Code) and shall begin that process within 180 day following receipt of that report.

(d) These watershed specific rules shall be developed in collaboration with the appropriate RWQCB, the landowner(s) or designee with land in the planning watershed, and other persons or groups within the watershed, and may also be incorporated into a TMDL implementation plan.

(e) The watershed specific rules shall remain in effect until the water body has been removed from the 303(d) list, or that the Board finds, after consulting with the appropriate RWQCB, that timber operations are no longer a significant source of the pollutant or stressor that limits water quality in the listed water body.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b)(2)(F).

Amend §§ 923.3, 943.3, and 963.3 Watercourse Crossings

Watercourse crossing drainage structures on logging roads shall be planned, constructed, reconstructed, and maintained or removed, according to the following standards. Exceptions may be provided through application of Fish and Game Code Sections 1601 and 1603 and shall be included in the THP.

(a) The location of all new permanent watercourse crossing drainage structures and temporary crossings located within the WLPZ shall be shown on the THP map. If the structure is a culvert intended for permanent use, the minimum diameter of the culvert shall be specified in the plan. Extra culverts beyond those shown in the THP map may be installed as necessary.

(b) The number of crossings shall be kept to a feasible minimum.

(c) Drainage structures on watercourses that support fish shall allow for unrestricted passage of all life stages of fish that may be present, and shall be fully described in the plan in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.

(d) When watercourse crossings, other drainage structures, and associated fills are removed the following standards shall apply:

(1) Fills shall be excavated to form a channel ~~which~~ that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel.

(2) The excavated material and any resulting cut bank shall be sloped back from the channel and stabilized to prevent slumping and to minimize soil erosion. Where needed, this material shall be stabilized by seeding, mulching, rock armoring, or other suitable treatment.

(e) All permanent watercourse crossings that are constructed or reconstructed shall accommodate the estimated 100-year flood flow, including debris and sediment loads.

(~~e~~f) Permanent watercourse crossings and associated fills and approaches shall be constructed or maintained to prevent diversion of stream overflow down the road and to minimize fill erosion should the drainage structure become obstructed. The RPF may propose an exception where explained in the THP and shown on the THP map and justified how the protection provided by the proposed practice is at least equal to the protection provided by the standard rule.

Alternative Language from the Technical Team

Any new permanent culverts installed within class I watercourses shall allow upstream and downstream passage of fish or listed aquatic species during any life stage and for the natural movement of bedload to form a continuous bed through the culvert and shall meet the following specifications:

(i) The culvert diameter shall be at least equal to the average channel bed width at bankfull stage at the elevation the culvert intersects the bed;

(ii) The culvert shall be installed at a natural or flat gradient;

(iii) The downstream invert shall be countersunk a minimum of 20% of the culvert diameter or rise;

(iv) upstream headcut potential shall be prevented;

(v) the culvert installation shall pass the 100-year flood event and shall include fill failure protection and a designed failure path.

Any alternative to these specifications requires an analysis and specifications demonstrating conformance with the intent of this section and subsection.

Note: Authority cited: Sections 4551, 4551.4, and 21004, Public Resources Code. Reference: Sections 4512, 4513, 4551, 4551.5, 4562.5 and 4562.7, Public Resources Code; 33 USC Section 1288(b), 40 CFR 130.2(q); California Case Law: *Natural Resources Defense Council, Inc. v. Arcata Natl. Corp.* (1972) 59 Cal. App. #d 959, 131 Cal Rptr. 172.

Adopt §§ 923.9 [943.9, 963.9] Roads and Landings in Watersheds with Threatened or Impaired Values.

In addition to all other district Forest Practice Rules, the following requirements shall apply in any planning watershed with threatened or impaired values:

(a) Where logging road or landing construction or reconstruction is proposed, the plan shall state the locations of and specifications for road or landing abandonment or other mitigation measures to minimize the adverse effects of long-term site occupancy of the transportation system within the watershed.

(b) New and reconstructed logging roads shall be no wider than a single-lane compatible with the largest type of equipment specified for use on the road, with adequate turnouts provided as required for safety. The maximum width of these roads shall be specified in the plan. These roads shall be outsloped where feasible and drained with water breaks or rolling dips (where the road grade is inclined at 7 percent or less), in conformance with other applicable Forest Practice Rules.

(c) The following shall apply on slopes greater than 50%:

(1) Specific provisions of construction shall be identified and described for all new roads.

(2) Where cutbank stability is not an issue, roads may be constructed as a full-benched cut (no fill). Spoils not utilized in road construction

shall be disposed of in stable areas with less than 30 percent slope and outside of any WLPZ, EEZ, or ELZ.

(3) Alternatively, roads may be constructed with balanced cuts and fills if properly engineered, or fills may be removed with the slopes recontoured prior to the winter period.

(d) In addition to the provisions listed under 14 CCR 923.1(e) [943.1(e), 963.1(e)], all permanent or seasonal logging roads with a grade of 15% or greater that extends 500 continuous feet or more shall have specific erosion control measures stated in the plan.

(e) Where situations exist that elevate risks to the factors set forth in 14 CCR 916.2(b), [936.2(b), 956.2(b)] (e.g., road networks are remote, the landscape is unstable, water conveyance features historically have a high failure rate, culvert fills are large) drainage structures and erosion control features shall be oversized, low maintenance, or reinforced, or they shall be removed before the completion of the timber operation. The method of analysis and the design for crossing protection shall be included in the plan.

Note: Authority cited: Sections 4551, 4551.5, 4553, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551, 4551.5, 4562.5, 4562.7, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b); *Natural Resources Defense Council, Inc. v. Arcata Natl. Corp.* (1976) 59 Cal.App. 3d 959, 131 Cal.Rptr. 172.